

***Amendments to the Claims***

The listing of claims will replace all prior versions and listings of claims in the application.

1. (*Currently Amended*) A lithographic projection apparatus, comprising:
  - a radiation system configured to provide a beam of radiation;
  - a support configured to support a patterning device, the patterning device configured to pattern the beam according to a desired pattern;
  - a substrate table configured to hold a substrate; and
  - a projection system configured to project the patterned beam onto a target portion of the substrate, wherein a space in the radiation system and/or projection system comprises a composition to remove a contaminant from a surface of the apparatus, the composition containing (a) and (b), wherein (a) is one or more ~~perhalogenated~~ perchlorinated, perbrominated, or periodinated C<sub>1</sub>-C<sub>6</sub> alkanes and (b) is one or more compounds including one or more nitrogen atoms and one or more atoms selected from hydrogen, oxygen, and halogen.
2. (*Currently Amended*) ~~[[An]]~~ The apparatus according to of claim 1, wherein the composition further contains at least one selected from:
  - (c) N<sub>2</sub>;
  - (d) H<sub>2</sub>; and
  - (e) one or more inert gases.

3. (Canceled)
4. (Canceled)
5. (Currently Amended) [[An]] The apparatus ~~according to~~ of claim 1, wherein the one or more compounds includes one or more nitrogen hydrides.
6. (Currently Amended) [[An]] The apparatus ~~according to~~ of claim 1, wherein the one or more compounds includes at least one selected from ammonia, diazene, hydrazine, and a salt thereof.
7. (Currently Amended) [[An]] The apparatus ~~according to~~ of claim 1, wherein the one or more compounds includes nitric acid.
8. (Canceled)
9. (Currently Amended) [[An]] The apparatus ~~according to~~ of claim 1, wherein the one or more compounds includes nitrogen dioxide.
10. (Currently Amended) [[An]] The apparatus ~~according to~~ of claim 1, wherein the composition further contains at least one selected from:
  - (c) oxygen;
  - (d) hydrogen; and
  - (e) water.

11. (*Currently Amended*) [[An]] The apparatus ~~according to~~ of claim 1, wherein the beam passes through the space.
12. (*Canceled*)
13. (*Currently Amended*) [[An]] The apparatus ~~according to~~ of claim 1, further comprising an activation device configured to produce reactive species of the composition.
14. (*Currently Amended*) [[An]] The apparatus ~~according to~~ of claim 13, wherein the activation device is configured to produce the reactive species by exciting molecules, or dissociating molecules, or both exciting and dissociating molecules, of the one or more alkanes, or the one or more compounds, or both the one or more alkanes and the one or more compounds.
15. (*Currently Amended*) [[An]] The apparatus ~~according to~~ of claim 13, wherein the activation device is one of a DUV source, an EUV source, a plasma source, an electrical field, a magnetic field, or an electron source.
16. (*Currently Amended*) [[An]] The apparatus ~~according to~~ of claim 13, wherein the activation device includes the radiation system.

17. (*Currently Amended*) ~~[[An]]~~ The apparatus ~~according to~~ of claim 1, wherein the composition is a gas, a solid, a liquid, or a beam of molecules.
18. (*Currently Amended*) ~~[[An]]~~ The apparatus ~~according to~~ of claim 1, wherein the composition is encapsulated in a microporous media.
19. (*Currently Amended*) A device manufacturing method, comprising:
  - providing a beam of radiation using a radiation system;
  - patterning the beam;
  - projecting the patterned beam of radiation onto a target portion of a layer of radiation-sensitive material at least partially covering a substrate; and
  - producing reactive species of a composition to remove a contaminant from a surface, wherein a space through which the beam passes comprises the composition containing (a) and (b), wherein (a) is one or more ~~perhalogenated~~ perchlorinated, perbrominated, or periodinated C<sub>1</sub>-C<sub>6</sub> alkanes and (b) is one or more compounds including one or more nitrogen atoms and one or more atoms selected from hydrogen, oxygen, and halogen.
20. (*Currently Amended*) ~~[[A]]~~ The method ~~according to~~ of claim 19, wherein producing the reactive species includes exciting molecules, or dissociating molecules, or both exciting and dissociating molecules, of the one or more alkanes, or the one or more compounds, or both the one or more alkanes and the one or more compounds.